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**Subject:** Conference regarding Admin Order -2-2015-2015  
**Date:** Thursday, June 04, 2015 10:49:00 AM  
**Attachments:** [UAO and SOW.pdf](#)

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Dear Counsel With reference to Administrative Order CERCLA-02-2015-2015 and in accordance with Paragraph 101 of that Order, EPA will hold a conference at 3pm on Friday, June 12, 2015 at the offices of EPA-Region 2, 290 Broadway, New York, New York 10007. I direct your attention to the guidance document found at: <http://www2.epa.gov/sites/production/files/documents/cerc106-uao-rpt.pdf> for information regarding the scope and extent of the issues discussed at a conference concerning the Administrative Order issued by EPA in this matter. Conferences such as these are not generally intended to be a forum for debating liability.

Therefore, while we understand that you may want present a rationale for why your client should not have been named in the Order or you may wish to offer a response action which differs from that described in the Order, I suggest that our limited time at the conference would be better served discussing issues regarding the specific actions required by the Order. Nonetheless, you are free to present whatever matters you would like to present that relate to the Site.

I will reserve a conference room and, within the next few days, email you a call-in number and "day of" instructions on where to go when you arrive on June 12. Thank you for your attention to this matter.

I am attaching a copy of the Statement of Work for you convenience.  
Sincerely, Frank Cardiello

IN THE MATTER OF:

LCP Chemicals, Inc. Superfund Site  
Union County, New Jersey

ISP Environmental Services, Inc. and  
Praxair, Inc.,

Respondents

U.S. EPA Index No.  
CERCLA-02-2015-2015

**UNILATERAL ADMINISTRATIVE ORDER  
FOR THE REMEDIAL DESIGN**

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## **APPENDICES:**

**Appendix A: Record of Decision**

**Appendix B: SOW for Remedial Design**

**Appendix C: Map of Site**

## **I. INTRODUCTION AND JURISDICTION**

1. This Administrative Order ("Order") directs ISP Environmental Services, Inc. and Praxair, Inc. (the "Respondents") to perform work in accordance with this Order and all attachments that are necessary to complete the Remedial Design ("RD") of the remedy described in the Record of Decision for the LCP Chemicals, Inc. Superfund Site, located in Linden, Union County, New Jersey. This Order is issued to the Respondents by the United States Environmental Protection Agency ("EPA") pursuant to the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), as amended, 42 U.S.C. § 9606(a). This authority was delegated to the Administrator of EPA by Executive Order 12580, dated January 23, 1987, and was redelegated to EPA Regional Administrators on September 13, 1987 by EPA Delegation No. 14-14-B. This authority was further redelegated on November 23, 2004, by the Regional Administrator of EPA, Region 2 to the Director of the Emergency and Remedial Response Division by EPA Region 2 by Delegation R-1200.

## **II. DEFINITIONS**

2. Unless otherwise expressly provided in this Order, terms used in this Order that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Order or in its appendices, the following definitions shall apply:

a. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601-9675.

b. "Day" or "day" shall mean a calendar day. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or federal or state holiday, the period shall run until the close of business of the next business day.

c. "Effective Date" shall mean the Effective Date as provided in Section XXIV.

d. "EPA" shall mean the United States Environmental Protection Agency and its successor departments, agencies or instrumentalities.

e. "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

f. "NJDEP" shall mean the New Jersey Department of Environmental Protection or any successor departments or agencies of the State.

g. "Paragraph" shall mean a portion of this Order identified by an Arabic numeral or an upper or lower case letter.

h. "Project Coordinator" shall mean the person designated by the Respondents who will be charged with the duty of being at all times knowledgeable of the performance of all Work performed pursuant to this Order.

i. "ROD" shall mean the EPA Record of Decision for the LCP Chemicals Superfund Site located in the City of Linden, Union County, State of New Jersey, which EPA signed on February 25, 2014 and all attachments thereto. The ROD is incorporated into this Order and is an enforceable part of this Order. The ROD is attached to this Order as "Appendix A."

j. "ROD Remedy" shall mean the remedy selected in the ROD, including the remedial design and the remedial action associated with the remedy selected in the ROD.

k. "RCRA" shall mean the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. § 6901, *et seq.*

l. "Remedial Project Manager" shall mean the person designated by the EPA who will be charged with the duty of being at all times knowledgeable of the performance of all Work performed pursuant to this Order.

m. "Remedial Design" or "RD" shall mean those activities to be undertaken by Respondents to develop the final plans and specifications for the Remedial Action pursuant to the Remedial Design Work Plan.

n. "Remedial Design Work Plan" shall mean the document developed pursuant to Section 3. (Remedial Design) of the Statement of Work and approved by EPA, and any modifications thereto.

o. "Respondents" shall mean ISP Environmental Services, Inc. and Praxair, Inc., and their assigns and successors.

p. "Section" shall mean a portion of this Order identified by a Roman numeral and including one or more Paragraphs.

q. "Site" shall mean the LCP Chemicals, Inc. Superfund Site located in Linden, Union County, New Jersey. A map showing the Site is attached to this Order as "Appendix C."

r. "Statement of Work" or "SOW" shall mean the statement of work which is attached to this Order as "Appendix B." The SOW is incorporated into this Order and is an enforceable part of this Order as are any modifications made thereto in accordance with this Order.

s. "State" shall mean the State of New Jersey.

t. "Supervising Contractor" shall mean the principal contractor retained by the Respondents to supervise and direct the implementation of the Work under this Order.

u. "United States" shall mean the United States of America and each department, agency, and instrumentality of the United States, including EPA.

v. "Waste Material" shall mean: (i) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (ii) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); and (iii) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27).

w. "Work" shall mean all work and other activities that Respondents are required to perform under this Order, including, but not limited to, tasks described in the SOW and any activities required to be undertaken pursuant to this Order.

### **III. FINDINGS OF FACTS**

#### **ISP Environmental Services, Inc. (formerly GAF Corp.)**

3. The LCP Chemicals, Inc. Superfund Site is located in an industrial area on the Tremley Point peninsula adjacent to the Arthur Kill, in Linden, Union County, New Jersey. The site is bordered by South Branch Creek to the east, a former GAF facility to the north, and Northville Industries, BP Corporation, and Mobil to the northeast, south, and west, respectively. South Branch Creek, a man-made drainage ditch, flows through a portion of the Site. The land, originally a coastal marshland, was filled in and developed for industrial use.

4. Soil at the Site is contaminated with a variety of chemicals and waste materials, including elevated levels of mercury from past chemical manufacturing and processing activities conducted by the former GAF Corporation ("GAF") and Union Carbide Company ("UCC").

5. GAF Corporation (formerly known as General Aniline and Film Corp.) began chlorine manufacturing operations at the Site in 1955. GAF produced chlorine and sodium hydroxide by the mercury cell electrolysis process.

6. Chlorine was manufactured by mixing salt with water to make brine. The brine would then be pumped into cells containing mercury that acted as a cathode in the electrolysis process. The mercury was partially recovered and recycled in a brine purification process.

7. The remaining mercury tainted sludge was placed into an on-site surface impoundment, called the Brine Sludge Lagoon which was constructed around 1961 by GAF and was located immediately west of the South Branch Creek.

8. Chlorine, sodium hypochlorite, hydrogen and sodium hydroxide were produced by the process. Mercury, chlorine and other chemicals were stored and used in the manufacturing processes during this time.

9. During GAF's ownership of the Site, process wastewater and wastewater from the mercury cell room trench sumps was routed to and stored in a pond on the Site prior to treatment.

10. GAF generated up to twenty tons per day of brine sludge which was discharged, along with wastewater treatment sludge, into the earthen lagoon.

11. ISP Environmental Services, Inc. ("IES") is the guarantor and/or the successor to GAF Corporation with respect to the LCP Chemicals Site and is the guarantor of and/or the successor to the liability of the GAF Corporation at that Site.

12. By letter dated October 28, 1999 EPA notified GAF that EPA believed that GAF was a Potentially Responsible Party ("PRP") under Section 107(a) of CERCLA relating to the Site.

13. By letter dated September 25, 2014 EPA notified IES that EPA believed that IES was a Potentially Responsible Party ("PRP") under Section 107(a) of CERCLA relating to the Site.

**Praxair, Inc. (Guarantor of Union Carbide Corporation)**

14. Union Carbide Corporation ("UCC") leased a 2.1 acre portion of the Site (the "UCC leased land") while GAF and later, LCP Chemicals, Inc., owned the Site.

15. Prior to the UCC operations at the Site, the UCC leased land had been vacant.

16. UCC began operations at the UCC leased land in 1957 and from 1957 until 1990 UCC operated a hydrogen transfill and packaging plant on the UCC leased land.

17. From 1957 until about 1990, GAF, and later, LCP Chemicals, transferred unpurified hydrogen gas to the UCC facility that existed on the UCC leased land. That hydrogen gas was contaminated with mercury and was delivered to UCC via above-ground piping and by trailer truck.

18. UCC purified the hydrogen gas on the UCC leased land and then containerized it for sale. The gas purification process which UCC used involved the removal of mercury from the hydrogen gas with a "knockout trap" purification system. That process generated liquid mercury. Some of this mercury was captured in the trap. UCC has stated that "the mercury collected from the trap was taken each day by the employees and sold by them until 1988. After 1988 recoverable mercury collected from the facility was manifested to a commercial recycler/reclaimer (Bethlehem Apparatus)."

19. In 1987, UCC investigated conditions at the UCC leased land at the Site. Those investigations revealed the following: a) 15 of the 24 samples taken from the roof of the UCC main process building had mercury at levels greater than 1 part per million ("ppm"); b) Samples taken near the roof/process vents of the main process building had various levels of mercury ranging up to 3800 ppm; c) approximately 30 pounds of free mercury existed in the purification equipment; and d) the concrete pad area next to the UCC process building and surrounding area was contaminated with mercury.

20. Mercury from the gas was released into the environment by the process used by UCC. Mercury vapors escaped into the atmosphere from the UCC processing and transported mercury onto the soil on both the UCC leased land and, in all likelihood, elsewhere on the Site.

21. In 1993, UCC conducted additional testing at the UCC leased land. This testing revealed the following: a) that mercury was present in the soil near facility's septic tank and leach field. Sludge and liquid in the leach field was also found to contain mercury and b) that mercury existed in the soil at the hydrogen bladder storage tank area and around the storage pad.

22. In 1988, UCC transferred ownership of its hydrogen plant to Linde Gases of the Mid-Atlantic, Inc., a subsidiary of Union Carbide Industrial Gases Inc., now known as Praxair, Inc. Praxair has assumed the obligations of UCC at this Site and is a successor to Linde Gases of the Mid-Atlantic, Inc. and is, therefore, liable for UCC's and Linde Gases of the Mid-Atlantic, Inc.'s liabilities relating to the Site.

23. By letters dated March 9, 1999 and September 25, 2014, EPA notified Praxair that EPA believed that Praxair was a Potentially Responsible Party ("PRP") under Section 107(a) of CERCLA relating to the Site.

#### **Nature and Extent of Contamination**

24. In 1999, IES entered into an Administrative Order on Consent with EPA, Index No. II-CERCLA- 02-99-2015, to perform a Remedial Investigation and Feasibility Study ("RI/FS") for the Site pursuant to 40 C.F.R. § 300.430 in 2001.

25. IES completed a Remedial Investigation ("RI") Report and a Feasibility Study ("FS") Report in August 2013.

26. The soils on the Site have levels of mercury, arsenic, PCBs, PAHs, as well as volatile organic chemicals ("VOCs") above the New Jersey nonresidential soil standards. Mercury is the primary contaminant of concern ("COC"), due to its persistence, toxicity and overall mass at the Site. The mercury found at the Site is typically found in the form of elemental or mercuric sulfide. The highest concentrations of mercury (>7,000 ppm) are found in the soil in anthropogenic fill at the Site. In areas near where the chlor-alkali cell buildings had been located, free elemental mercury is present down to a depth of about 17 feet.

27. Exceedances of state surface water standards were detected for a number of substances in the South Branch Creek, including mercury and arsenic. Low marsh soils adjacent to the creek contained high levels of mercury (maximum concentration of 3,000 mg/kg). Mercury was also detected in all fish and crab tissue analyzed.

28. Sediment samples were collected from the South Branch Creek and adjacent to the Creek's mouth in the Arthur Kill. Mercury, arsenic and total PCBs were the most frequently detected COCs found in the South Branch Creek sediments.

29. Samples of the overburden groundwater showed exceedances of the applicable state groundwater standards for several chemicals, including mercury, arsenic and VOCs.

30. Various buildings and structures remain on the LCP property. The buildings are in a state of disrepair and in the case of the former mercury cell buildings, unsafe to enter. In some cases the building's porous material contains free elemental mercury. The amount of building material on Site is roughly 32,000 cubic yards (61,000 tons).

31. Pursuant to Section 117 of CERCLA, 42 U.S.C. § 9617, EPA published notice of the completion of the FS and of the Proposed Plan for remedial action on August 21, 2013 in a major local newspaper of general circulation. EPA provided an opportunity for written and oral comments from the public on the proposed plan for remedial action. A copy of the transcript of the public meeting is available to the public as part of the administrative record upon which the Regional Administrator, EPA Region 2, based the selection of the response action.

32. The decision by EPA on the remedial action to be implemented at the Site is embodied in a final Record of Decision ("ROD"), executed on February 25, 2014, on which the State had a reasonable opportunity to review and comment. The ROD includes a responsiveness summary to the public comments. Notice of the final plan was published in accordance with Section 117(b) of CERCLA, 42 U.S.C. § 9617(b).

#### **IV. CONCLUSIONS OF LAW AND DETERMINATIONS**

33. Mercury, arsenic and other substances found in the soil, the structures and at various other locations at the Site are "hazardous substances" within the meaning of that term as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

34. The Site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

35. Respondents are "persons" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

36. Respondents are liable as responsible parties under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), for conditions at the Site and are subject to this Order under Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

37. The presence of hazardous substances at the Site or the past, present or potential migration of hazardous substances currently located at or emanating from the Site, constitute actual and/or threatened "releases" as defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

38. The potential for further migration of hazardous substances from the Site poses a "threatened release of a hazardous substance from a facility" as that phrase is used in Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

39. Based upon the FINDINGS set forth above and in the documents found in EPA's administrative record for the Site, EPA has determined that the release and threatened release of hazardous substances into the environment at and from the Site may present an imminent and

substantial endangerment to the public health or welfare or the environment within the meaning of Section 106(a) of CERCLA, 42 U.S.C. § 9606(a).

40. The response actions set forth in the ROD are required to prevent and/or mitigate any actual and/or potential threat of harm to human health or welfare or the environment caused by the release and threatened release of mercury and other hazardous substances from the Site.

#### **V. NOTICE TO THE STATE**

41. Notice of this Order was given to the New Jersey Department of Environmental Protection on March 19, 2015, pursuant to Section 106(a) of CERCLA, 42 U.S.C. 9606(a).

#### **VI. ORDER**

42. Based on the foregoing FINDINGS, CONCLUSIONS and DETERMINATIONS, Respondents are hereby ordered to comply with the following provisions, including but not limited to, all attachments, documents, schedules and deadlines in this Order, attached to this Order, or incorporated by reference into this Order.

#### **VII. NOTICE OF INTENT TO COMPLY**

43. Respondents shall provide, not later than 14 days after the Effective Date, written notice to EPA's Remedial Project Manager ("RPM") and Assistant Regional Counsel for the Site at the address specified in Section XV, stating whether Respondents will comply with the terms of this Order. If Respondents do not unequivocally commit to perform or finance the Work as provided by this Order, they shall be deemed to have violated this Order and to have failed or refused to comply with this Order. Respondents' written notice shall describe, using facts that exist on or prior to the Effective Date, any "sufficient cause" defenses asserted by Respondents under Sections 106(b) and 107(c)(3) of CERCLA, 42 U.S.C. § 9606(b) and § 9607(c)(3). The absence of a response by EPA to the notice required by this Paragraph shall not be deemed to be acceptance of Respondents' assertions.

#### **VIII. PARTIES BOUND**

44. This Order shall apply to and be binding upon the Respondents and their assigns and successors. Respondents are responsible for completing the Work and all applicable requirements of this Order. No change in the ownership, corporate status, or other control of the Respondents shall alter any of the Respondent's responsibilities under this Order.

45. Respondents shall provide a copy of this Order to each contractor, subcontractor, laboratory, or consultant retained to perform any Work under this Order, within 5 Days after the Effective Date or on the date such services are retained, whichever date occurs later. Respondents shall also provide a copy of this Order to each person representing Respondents with respect to the Site or the Work and shall condition all contracts and subcontracts entered into hereunder upon performance of the Work in conformity with the terms of this Order. With regard to the activities undertaken pursuant to this Order, each contractor and subcontractor shall

be deemed to be related by contract to the Respondents within the meaning of Section 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3). Notwithstanding the terms of any contract, Respondents are responsible for compliance with this Order and for ensuring that its contractors, subcontractors and agents comply with this Order, and perform any Work in accordance with this Order.

## **IX. WORK TO BE PERFORMED**

46. The Work to be performed consists of all actions required in the SOW. Respondents shall conduct all activities specified in the SOW in accordance with the time frames specified therein.

### **47. Selection of Supervising Contractor.**

a. All aspects of the Work to be performed by Respondents pursuant to the Order shall meet any and all requirements of applicable federal, state and local laws and be performed under the direction and supervision of a Supervising Contractor, the selection of which shall be subject to disapproval by EPA. The Supervising Contractor shall be a qualified licensed professional engineering firm and must have a quality assurance system that complies with the Uniform Federal Policy for Implementing Quality Systems ("UFP-QS"), (EPA/505/F-03/001, March 2005).

b. Within 21 days after the Effective Date, Respondents shall notify EPA in writing of the name and qualifications of the proposed Supervising Contractor, including primary support entities and staff, proposed to be used in carrying out work under this Order and provide a copy of the contractor's quality management plan to demonstrate compliance with UFP-QS. EPA will issue a notice of disapproval or an authorization to proceed regarding hiring of the proposed contractor. If at any time thereafter, Respondents propose to change a Supervising Contractor, Respondents shall give such notice to EPA and must obtain an authorization to proceed from EPA before the new Supervising Contractor performs, directs, or supervises any Work under this Order.

c. If EPA disapproves a proposed Supervising Contractor, EPA will notify Respondents in writing. Respondents shall submit to EPA a list of contractors, including the qualifications of each contractor that would be acceptable to them within 7 days after receipt of EPA's disapproval of the contractor previously proposed. EPA will provide written notice of the names of any contractor(s) that it disapproves and an authorization to proceed with respect to any of the other contractors. Respondents may select any contractor from that list that is not disapproved and shall notify EPA of the name of the contractor selected within 7 days of EPA's authorization to proceed.

d. Respondents shall notify EPA of the name and qualifications of any other contractor or subcontractor proposed to perform Work under this Order at least 10 days prior to commencement of such Work.

48. EPA retains the right to disapprove of any, or all, of the contractors and/or subcontractors proposed by Respondents to conduct the Work. If EPA disapproves in writing of any of Respondents' proposed contractors to conduct the Work, Respondents shall propose a different contractor within 7 days of receipt of EPA's disapproval.

49. All plans and specifications shall be prepared under the supervision of, and signed/certified by, a licensed New Jersey professional engineer.

50. Within 21 days after the Effective Date, Respondents shall notify EPA, in writing, of the name and title of the proposed Project Coordinator, and alternate Project Coordinator, who may be employees of the Supervising Contractor. The Project Coordinator shall be responsible for the day to day management of all Work to be performed pursuant to the Order, knowledgeable at all times about all Work, and serve as the primary contact for EPA on all matters relating to the Work. The Project Coordinator should be available for EPA to contact during all working days. Respondents' Project Coordinator shall be subject to disapproval by EPA and shall have the technical expertise sufficient to adequately oversee all aspects of the Work. The Project Coordinator shall not be an attorney.

#### **X. MODIFICATION OF SOW OR RELATED WORK PLANS**

51. If EPA determines that it is necessary to modify the work specified in the SOW, or in work plans developed pursuant to the SOW, to carry out and maintain the effectiveness of the remedy set forth in the ROD, then EPA may issue such modification and notify Respondents of such modification.

52. Respondents shall modify the work specified in the SOW and/or related work plans in accordance with the modification issued by EPA. The modification shall be incorporated into and enforceable under this Order, and Respondents shall implement all work required by such modification. Respondents shall incorporate the modification into the Remedial Design Work Plan under Section 3.1 (RD Work Plan) of the SOW.

53. Nothing in this Paragraph shall be construed to limit EPA's authority to require performance of further response actions as otherwise provided in this Order.

#### **XI. ENDANGERMENT AND EMERGENCY RESPONSE**

54. If any action or occurrence during the performance of the Work causes or threatens a release of Waste Material from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, the Respondents shall immediately take all appropriate action to prevent, abate, or minimize such release or threat of release and shall immediately notify the National Response Center at (800) 424-8802 and the appropriate EPA Remedial Project Manager. If the Remedial Project Manager is unavailable, the Respondents shall notify the Chief of the Southern New Jersey Section of the Emergency and Remedial Response Division of EPA Region 2 at (212) 637-4399 of the incident or Site conditions. The Respondents shall take such actions in consultation with EPA's Remedial Project Manager, or other available authorized EPA officer, and in accordance with all applicable provisions of this Order, including, but not limited to, the Health and Safety Plans, the

Contingency Plans, and any other applicable plans or documents developed pursuant to the SOW.

55. The Respondents shall submit a written report to EPA within 7 days after each such release or threatened release, setting forth the events that occurred and the measures taken, or to be taken, to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. Within 30 days after the conclusion of such an event, Respondents shall submit a final report setting forth all actions taken in response thereto. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. §9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. §11004, et seq.

56. Nothing in the preceding Paragraphs or elsewhere in this Order shall be deemed to limit any authority of the United States to take, direct or order all appropriate action to protect human health and the environment or to prevent, abate or minimize an actual or threatened release of hazardous substances on, at or from the Site.

## **XII. EPA REVIEW OF SUBMISSIONS**

57. After review of any deliverable, plan, report or other item which is required to be submitted for review and approval pursuant to this Order, EPA may: (a) approve the submission; (b) approve the submission with modifications; (c) disapprove the submission and direct Respondents to re-submit the document after incorporating EPA's comments; or (d) disapprove the submission and assume responsibility for performing all or any part of the response action. As used in this Order, the terms "approval by EPA," "EPA approval," or a similar term means the action described in (a) or (b) above.

58. In the event of approval or approval with modifications by EPA, Respondents shall proceed to take any action required by the plan, report, or other item, as approved or modified by EPA.

59. Upon receipt of a notice of disapproval or a request for a modification, Respondents shall, within 14 days or such longer time as specified by EPA in its notice of disapproval or request for modification, correct the deficiencies and resubmit the plan, report, or other item for approval. Notwithstanding the notice of disapproval, or approval with modifications, Respondents shall proceed, at the direction of EPA, to take any action required by any non-deficient portion of the submission.

60. If upon the first resubmission or upon any subsequent resubmission, the plan, report or other item is disapproved by EPA, Respondents shall be deemed to be out of compliance with this Order. In the event that a resubmitted plan, report or other item, or portion thereof, is disapproved by EPA, EPA may again require Respondents to correct the deficiencies, in accordance with the preceding Paragraphs of this Section. In addition, or in the alternative, EPA retains the right to amend or develop the plan, report or other item. Each deficient resubmission shall constitute a separate violation of this Order subject to daily penalties.

61. All plans, reports, and other submittals required to be submitted to EPA under this Order shall, upon approval by EPA, be deemed to be incorporated in and an enforceable part of this Order. In the event that EPA approves a portion of a plan, report, or other item required to be submitted to EPA under this Order, the approved portion shall be deemed to be incorporated in and as an enforceable part of this Order.

62. Respondents may request in writing that EPA approve modifications to EPA-approved reports, schedules, deliverables and other writings required under the terms of this Order at any time during the implementation of the Work required by this Order. Any and all such modifications under this Order must be approved in writing and signed by the Chief of the Special Projects Branch, Emergency and Remedial Response Division, EPA-Region 2.

a. EPA shall have the sole authority to make any such modifications under this Order.

b. EPA shall be the final arbiter in any dispute regarding the sufficiency or acceptability of all documents submitted and all activities performed pursuant to this Order. EPA may modify those documents and/or perform or require the performance of additional work unilaterally to accomplish the objectives set forth in this Order.

### **XIII. PROGRESS REPORTS**

63. In addition to the other deliverables set forth in this Order, Respondents shall provide written monthly progress reports to EPA with respect to actions and activities undertaken pursuant to this Order. The progress reports shall be submitted on or before the 15th day of each month following the Effective Date.

### **XIV. COMPLIANCE WITH APPLICABLE LAWS**

64. All activities carried out by Respondents pursuant to this Order shall be performed in accordance with the requirements of all federal and state laws and regulations. EPA has determined that the activities contemplated by this Order are consistent with the NCP.

65. Except as provided in Section 121(e) of CERCLA and the NCP, no permit shall be required for any portion of the Work conducted entirely on-Site. Where any portion of the Work requires a federal or state permit or approval, Respondents shall submit timely applications and take all other actions necessary to obtain and to comply with all such permits or approvals.

66. This Order is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

### **XV. REMEDIAL PROJECT MANAGER**

67. All communications, whether written or oral, from Respondent to EPA shall be directed to EPA's Remedial Project Manager. Respondents shall submit to EPA and NJDEP copies of all documents, including plans, reports, and other correspondence, which are developed

pursuant to this Order, and shall send these documents by certified mail or overnight mail, or by such other electronic means as EPA may approve or require, to the following addresses:

One copy to:

Jonathan Gorin  
Southern New Jersey Remediation Section  
Emergency and Remedial Response Division  
U.S. Environmental Protection Agency  
290 Broadway, 19<sup>th</sup> Floor  
New York, New York 10007-1866

One (1) copy to:

New Jersey Superfund Branch  
Office of Regional Counsel  
U.S. Environmental Protection Agency  
290 Broadway, 17<sup>th</sup> Floor  
New York, New York 10007-1866  
Attn: Site Attorney, LCP Chemicals Inc., Superfund Site

68. In the event that EPA requests more than the number of copies stated above of any report or other documents required by this Order for itself or the State, Respondents shall provide the number of copies requested. Upon request by EPA, Respondents shall submit in electronic form all or any portion of any deliverables Respondents are required to submit pursuant to the provisions of the Order.

69. EPA has the unreviewable right to change its Remedial Project Manager. If EPA changes its Remedial Project Manager, EPA will inform Respondents in writing of the name, address, and telephone number of the new Remedial Project Manager.

70. EPA's Remedial Project Manager shall have the authority lawfully vested in a Remedial Project Manager by the National Contingency Plan, 40 C.F.R. Part 300. EPA's Remedial Project Manager shall have authority, consistent with the National Contingency Plan, to halt any work required by this Order, and to take any necessary response action.

#### **XVI. ACCESS TO SITE NOT OWNED BY RESPONDENTS**

71. If the Site, the off-Site area that is to be used for access, property where documents required to be prepared or maintained by this Order are located, or other property subject to or affected by the remedial design, is owned in whole or in part by parties other than those bound by this Order, Respondents will obtain, or use its best efforts to obtain, site access agreements from the present owners within 60 days of the Effective Date. Such agreements shall provide access for EPA, its contractors and oversight officials, the State and its contractors, and Respondents and Respondents' authorized representatives and contractors, and such agreements shall specify that Respondents are not EPA's representative with respect to liability associated

with the activities to be undertaken. Copies of such agreements shall be provided to EPA prior to Respondents' initiation of field activities. Respondents' best efforts shall include providing reasonable compensation to any property owner. If access agreements are not obtained within the time referenced above, Respondents shall immediately notify EPA of its failure to obtain access. Subject to the United States' non-reviewable discretion, EPA may use its legal authorities to obtain access for Respondents, may perform those response actions with EPA contractors at the property in question. If EPA performs those tasks or activities with contractors, Respondents shall perform all other activities not requiring access to that property. Respondents shall integrate the results of any such tasks undertaken by EPA into its reports and deliverables.

## **XVII. SITE ACCESS AND DATA/DOCUMENT AVAILABILITY**

72. Respondents shall allow EPA and its authorized representatives and contractors to enter and freely move about all property at the Site and off-Site areas subject to or affected by the work under this Order or where documents required to be prepared or maintained by this Order are located, for the purposes of inspecting conditions, activities, the results of activities, records, operating logs, and contracts related to the Site or Respondents and their representatives or contractors pursuant to this Order; reviewing the progress of the Respondents in carrying out the terms of this Order; conducting tests as EPA or its authorized representatives or contractors deem necessary; using a camera, sound recording device or other documentary type equipment; and verifying the data submitted to EPA by Respondents. Respondents shall allow EPA and its authorized representatives to enter the Site, to inspect and copy all records, files, photographs, documents, sampling and monitoring data, and other writings related to work undertaken in carrying out this Order. Nothing herein shall be interpreted as limiting or affecting EPA's right of entry or inspection authority under federal law.

73. Respondents may assert a claim of business confidentiality covering part or all of the information submitted to EPA pursuant to the terms of this Order under 40 C.F.R. 2.203, provided such claim is not inconsistent with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7) or other provisions of law. This claim shall be asserted in the manner described by 40 C.F.R. 2.203(b) and substantiated by Respondents at the time the claim is made. Information determined to be confidential by EPA will be given the protection specified in 40 C.F.R. Part 2. If no such claim accompanies the information when it is submitted to EPA, it may be made available to the public by EPA or the State of New Jersey without further notice to Respondents. Respondents shall not assert confidentiality claims with respect to any data related to Site conditions, sampling, or monitoring.

74. Respondents shall maintain for the period during which this Order is in effect, an index of documents that Respondents claim contain confidential business information. The index shall contain, for each document, the date, author, addressee, and subject of the document. Upon written request from EPA, Respondents shall submit a copy of the index to EPA.

75. As requested by EPA, Respondents shall participate in the preparation of such information for distribution to the public and in public meetings which may be held or sponsored by EPA to explain activities at or relating to the Site.

## **XVIII. RECORDS PRESERVATION**

76. Respondents shall provide to EPA upon request, copies of all documents and information within its possession and/or control or that of its contractors or agents relating to activities at the Site or to the implementation of this Order, including but not limited to sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Respondents shall also make available to EPA for purposes of investigation, information gathering, or testimony, its employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

77. Until 10 years following the Effective Date, Respondents shall preserve and retain all records and documents in its possession or control, including the documents in the possession or control of its contractors and agents on and after the Effective Date that relate in any manner to the Site. At the conclusion of this document retention period, Respondents shall notify the United States at least 90 days prior to the destruction of any such records or documents, and upon request by the United States, Respondents shall deliver any such records or documents to EPA.

78. Within 90 days after the Effective Date, Respondents shall submit a written certification to EPA's Remedial Project Manager and Site Attorney that it has not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information relating to its potential liability with regard to the Site since notification of potential liability by the United States or the State.

## **XIX. DELAY IN PERFORMANCE**

79. Any delay in performance of this Order that, in EPA's judgment, is not properly justified by Respondents under the terms of this Section shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondents' obligations to fully perform all obligations under the terms and conditions of this Order.

80. Respondents shall notify EPA of any delay or anticipated delay in performing any requirement of this Order. Such notification shall be made by telephone and electronic mail to EPA's Remedial Project Manager within 48 hours after Respondents first knew or should have known that a delay might occur. Respondents shall adopt all reasonable measures to avoid or minimize any such delay. Within 7 days after notifying EPA by telephone and electronic mail, Respondents shall provide written notification fully describing the nature of the delay, any justification for delay, any reason why Respondents should not be held strictly accountable for failing to comply with any relevant requirements of this Order, the measures planned and taken to minimize the delay, and a schedule for implementing the measures that will be taken to mitigate the effect of the delay. Increased costs or expenses associated with implementation of the activities called for in this Order is not a justification for any delay in performance.

## **XX. UNITED STATES NOT LIABLE**

81. Neither the United States nor EPA, by issuance of this Order, or by issuance of any approvals pursuant to this Order, assume any liability for any injuries or damages to persons or property resulting from acts or omissions by Respondents, or its directors, officers, employees, agents, representatives, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order, or Respondents' failure to perform properly or complete the requirements of this Order. Neither the United States nor EPA may be deemed to be a party to any contract entered into by Respondents or their directors, officers, employees, agents, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order, and Respondents shall not represent to anyone that the United States or EPA is or may be a party to any such contract.

## **XXI. ENFORCEMENT AND RESERVATION**

82. Nothing in this Order constitutes a satisfaction of or release from any claim or cause of action against Respondents or any person not a party to this Order, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

83. Nothing in this Order shall be deemed to constitute preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or C.F.R. § 300.700(d).

84. No action or decision by EPA pursuant to this Order shall give rise to any right to judicial review, except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

85. EPA reserves the right to bring an action against Respondents under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States related to this Order and/or for any other response costs which have been incurred or will be incurred by the United States relating to the Site. This reservation shall include, but not be limited to past costs, direct costs, indirect costs, the costs of oversight, the costs of compiling the cost documentation to support oversight cost demand, as well as accrued interest as provided in Section 107(a) of CERCLA.

86. Notwithstanding any other provision of this Order, at any time during the response action, EPA may perform its own studies, complete the response action (or any portion of the response action) as provided in CERCLA and the NCP, and seek reimbursement from Respondents for its costs, or seek any other appropriate relief.

87. Nothing in this Order shall preclude EPA from taking any additional enforcement actions, including modification of this Order or issuance of additional Orders, and/or additional remedial or removal actions as EPA may deem necessary, or from requiring Respondents in the future to perform additional activities pursuant to CERCLA, 42 U.S.C. § 9606(a), et seq., or any other applicable law. Respondents shall be liable under CERCLA Section 107(a), 42 U.S.C. § 9607(a), for the costs of any such additional actions.

88. Notwithstanding any provision of this Order, the United States hereby retains all of its information-gathering, inspection and enforcement authorities and rights under CERCLA, RCRA, and any other applicable statutes or regulations.

89. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person for any liability it may have arising out of or relating in any way to the Site.

90. If a court issues an order that invalidates any provision of this Order or finds that Respondents have sufficient cause not to comply with one or more provisions of this Order, Respondents shall remain bound to comply with all provisions of this Order not invalidated by the court's order.

91. Except as specifically provided in this Order, nothing herein shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Order, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring the Respondents in the future to perform additional activities pursuant to CERCLA or any other applicable law. EPA reserves the right to bring an action against Respondents under section 107 of CERCLA, 42 U.S.C. Section 9607, for recovery of any response costs incurred by the United States related to this Order or the Site and not reimbursed by Respondents.

92. Notwithstanding any other provision of this Order, failure of Respondents to comply with any provision of this Order may subject Respondents to civil penalties of up to thirty-seven thousand five hundred dollars (\$37,500) per violation per Day, as provided in Section 106(b) (1) of CERCLA, 42 U.S.C. § 9606(b) (I), and the Debt Collection and Improvement Act of 1996 (see civil Monetary Penalty Inflation Adjustment Rule, 40 C.F.R. Part 19). Respondents also may be subject to punitive damages in an amount at least equal to but not more than three times the amount of any costs incurred by the United States as a result of such failure to comply with this Order, as provided in Section 107(c) (3) of CERCLA, 42 U.S.C. § 9607(c) (3). Should Respondents violate this Order or any portion thereof, EPA may carry out the required actions unilaterally, pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604, and/or may seek judicial enforcement of this Order pursuant to Section 106 of CERCLA, 42 U.S.C. § 9606.

## **XXII. QUALITY ASSURANCE, SAMPLING, AND DATA ANALYSIS**

93. Respondents shall use quality assurance, quality control, and other technical activities and chain of custody procedures for all design or monitoring samples consistent with *EPA Requirements for Quality Assurance Project Plans, QA/R5, EPA/240/B-01/003* (Mar. 2001, reissued May 2006); *Guidance for Quality Assurance Project Plans, QA/G-5, EPA/240/R-02/009* (Dec. 2002); *Uniform Federal Policy for Quality Assurance Project Plans, Parts 1-3, EPA/505/B-04/900A-900C, Mar. 2005*, and subsequent amendments to such guidelines.

94. Prior to the commencement of any sampling or monitoring project under this Order, Respondents shall submit to EPA for approval a Quality Assurance Project Plan ("QAPP") that is consistent with the SOW, the NCP, and applicable guidance documents.

95. Respondents shall ensure that EPA personnel and their authorized representatives are allowed access at reasonable times to all laboratories utilized by Respondents pursuant to this Order. In addition, Respondents shall ensure that such laboratories analyze all samples submitted by EPA pursuant to the QAPP for quality assurance, quality control, and technical activities that will satisfy the stated performance criteria as specified in the QAPP. Respondents shall ensure that the laboratories it uses for the analysis of samples taken pursuant to this Order perform all analyses using EPA-accepted methods: *i.e.*, the methods documented in *USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis*, ILMO5.4 (Dec. 2006), *USEPA Contract Laboratory Program Statement of Work for Organic Analysis*, SOM01.2 (amended April 2007), and *USEPA Contract Laboratory Program Statement of Work for Inorganic Superfund Methods (Multi-Media, Multi-Concentration)*, ISM01.2 (Jan. 2010), or other methods acceptable to EPA. Respondents shall ensure that all field methodologies utilized in collecting samples for subsequent analysis pursuant to this Order are conducted in accordance with the procedures set forth in the QAPP approved by EPA.

96. Upon request, Respondents shall provide split or duplicate samples to EPA or its authorized representatives. Respondents shall notify EPA not less than 30 days in advance of any sample collection activity unless shorter notice is agreed to by EPA. In addition, EPA shall have the right to take any additional samples that EPA deems necessary. Upon request, EPA shall provide to Respondents split or duplicate samples of any samples it takes as part of EPA's oversight of Respondents' implementation of the Work.

97. Respondents shall submit to EPA 3 copies of the results of all sampling and/or tests or other data obtained or generated by or on behalf of Respondents with respect to the Site and/or the implementation of this Order, unless EPA requires or agrees otherwise.

98. Notwithstanding any provision of this Order, the United States retains all of its information-gathering and inspection authorities and rights, including enforcement actions related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

### **XXIII. ADMINISTRATIVE RECORD**

99. Upon request by EPA, Respondents shall submit to EPA all documents related to the implementation of the Work for possible inclusion in the administrative record file.

### **XXIV. EFFECTIVE DATE AND COMPUTATION OF TIME**

100. The Effective Date of this Order shall be 21 days following the day that this Order is signed by the Director, Emergency and Remedial Response Division, EPA Region 2, unless a conference is timely requested pursuant to Paragraph 101, below. If such conference is timely requested, the Effective Date of this Order shall be 5 Days following the date the conference is held, unless EPA otherwise modifies the Effective Date in writing. All times for performance of ordered activities shall be calculated from this Effective Date.

**XXV. OPPORTUNITY TO CONFER**

101. Respondents may, before the Effective Date, request a conference with EPA to discuss this Order. If requested, the conference shall occur within 10 Days of Respondents' request for a conference.

102. The purpose and scope of the conference shall be limited to issues involving the implementation of the response actions required by this Order and the extent to which Respondents intend to comply with this Order. This conference is not an evidentiary hearing, and does not constitute a proceeding to challenge this Order. It does not give Respondents a right to seek review of this Order, or to seek resolution of potential liability, and no official stenographic record of the conference will be made. At any conference held pursuant to Respondents' request, Respondents may appear in person or by an attorney or other representative.

103. Requests for a conference must be by telephone followed by written confirmation sent by overnight mail and electronic mail that Day to:

Frank X. Cardillo  
Assistant Regional Counsel  
Office of Regional Counsel  
U.S. Environmental Protection Agency  
290 Broadway, 17<sup>th</sup> Floor  
New York, N.Y. 10007-1866  
Telephone: (212) 637-3148  
[cardillo.frank@epa.gov](mailto:cardillo.frank@epa.gov)

So ORDERED, this 20 Day of May, 2015.

By: *Walter E. Mugdan*  
Walter E. Mugdan, Director  
Emergency and Remedial Response Division  
U.S. Environmental Protection Agency-Region 2



**REMEDIAL DESIGN**

**STATEMENT OF WORK**

**LCP CHEMICALS, INC. SUPERFUND SITE**

**Linden, Union County, State of New Jersey**

**EPA Region 2**

**April 2015**

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## **1. INTRODUCTION**

- 1.1 Purpose of the SOW.** This Statement of Work (SOW) sets forth the procedures and requirements for implementing the Work.
- 1.2 Structure of the SOW.** Section 2 (Community Involvement) sets forth EPA's and Respondent's responsibilities for community involvement. Section 3 (Remedial Design (RD)) sets forth the process for developing the RD, which includes the submission of specified primary deliverables. Section 5 (Deliverables) describes the content of the supporting deliverables and the general requirements regarding Respondents' submission of, and EPA's review of, approval of, comment on, and/or modification of, the deliverables. Section 6 (Schedules) sets forth the schedule for submitting the primary deliverables, specifies the supporting deliverables that must accompany each primary deliverable, and sets forth the schedule of milestones regarding the completion of the Remedial Action (RA). Section 7 (State Participation) addresses State participation, and Section 8 (References) provides a list of references, including URLs.
- 1.3 The Scope of the Remedy** includes the actions described in the ROD, including:
- (a) Installation of a capping system to prevent direct contact with soils and exposure to mercury vapor;
  - (b) Treatment of the soil containing visible elemental mercury by mixing with it sulfur to convert the mercury to mercuric sulfide;
    - (1) If, after reviewing the pilot study results relating to the soil treatment, EPA determines that treating the Principal Threat Waste (PTW) to full depth is not technically practicable, EPA will require treatment of the PTW to mid-depth. If EPA determines that the treatment of the PTW waste is not meeting pre-set goals at any depth, then EPA will not require treatment of the PTW.
  - (c) Excavation and on-site disposal of sediments and marsh soils from the Northern Off-Site Ditch and the downstream portion of the South Branch Creek;
  - (d) Restoration of the excavated areas;
  - (e) Controlled demolition of the Site's buildings, recycling of non-porous material and placement of porous material under the cap;
  - (f) Containment and collection of the overburden groundwater layer by a barrier wall and collection/disposal system;
  - (g) Groundwater monitoring; and
  - (h) Implementation of institutional controls, in the form of a deed notice and Classification Exception Area (CEA).

- 1.4 The terms used in this SOW that are defined in Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), in regulations promulgated under CERCLA, or in the Unilateral Administrative Order (UAO) have the meanings assigned to them in CERCLA, in such regulations, or in the UAO, except that the term "Paragraph" or "¶" means a paragraph of the SOW, unless otherwise stated.

## 2. COMMUNITY INVOLVEMENT

### 2.1 Community Involvement Responsibilities

- (a) EPA has the lead responsibility for developing and implementing community involvement activities at the Site. Previously during the RI/FS phase, EPA developed a Community Involvement Plan (CIP) for the Site. Pursuant to 40 C.F.R. § 300.435(c), EPA shall review the existing CIP and determine whether it should be revised to describe further public involvement activities during the Work that are not already addressed or provided for in the existing CIP.
- (b) If requested by EPA, Respondents shall support EPA's community involvement activities. This may include providing online access to initial submissions and updates of deliverables to (1) Community Advisory Groups, (2) Technical Assistance Grant recipients and their advisors, and (3) other entities to provide them with a reasonable opportunity for review and comment. EPA may describe in its CIP Respondents' responsibilities for community involvement activities. All community involvement activities conducted by Respondents at EPA's request are subject to EPA's oversight.
- (c) **Respondents' CI Coordinator.** If requested by EPA, Respondents shall, within [15] days, designate and notify EPA of Respondents' Community Involvement Coordinator (Respondents' CI Coordinator). Respondents may hire a contractor for this purpose. Respondents' notice must include the name, title, and qualifications of the Respondents' CI Coordinator. Respondents' CI Coordinator is responsible for providing support regarding EPA's community involvement activities, including coordinating with EPA's CI Coordinator regarding responses to the public's inquiries about the Site.

## 3. REMEDIAL DESIGN

- 3.1 **RD Work Plan.** Respondents shall submit a RD Work Plan (RDWP) for EPA approval. The RDWP must include:

- (a) Plans for implementing all RD activities identified in this SOW, in the RDWP, or required by EPA to be conducted to develop the RD;
- (b) A description of the overall management strategy for performing the RD, including a proposal for phasing of design and construction, if applicable;

- (c) A description of the proposed general approach to contracting, construction, operation, maintenance, and monitoring of the RA as necessary to implement the Work;
  - (d) A description of the responsibility and authority of all organizations and key personnel involved with the development of the RD;
  - (e) Descriptions of any areas requiring clarification and/or anticipated problems (e.g., data gaps);
  - (f) Description of the pre-design investigations;
  - (g) Description of the proposed treatability and pilot study;
  - (h) Descriptions of any applicable permitting requirements and other regulatory requirements;
  - (i) Description of plans for obtaining access in connection with the Work, such as property acquisition, property leases, and/or easements; and
  - (j) All supporting deliverables required to accompany the RDWP as specified in the RD Schedule set forth in ¶ 6.2 (“RD Schedule”).
- 3.2 Respondents shall meet regularly with EPA to discuss design issues as necessary, as directed or determined by EPA.
- 3.3 **Pre-Design Investigation.** The purpose of the Pre-Design Investigation (PDI) is to address data gaps by conducting additional field investigations.
- (a) **PDI Work Plan.** Respondents shall submit a PDI Work Plan (PDIWP) for EPA approval. The PDIWP must include:
    - (1) An evaluation and summary of existing data and description of data gaps;
    - (2) A sampling plan including media to be sampled, contaminants or parameters for which sampling will be conducted, location (areal extent and depths), and number of samples; and
    - (3) Cross references to quality assurance/quality control (QA/QC) requirements set forth in the Quality Assurance Project Plan (QAPP) as described in ¶ 5.7(e).
  - (b) Following the PDI, Respondents shall submit a PDI Evaluation Report. This report must include:
    - (1) Summary of the investigations performed;
    - (2) Summary of investigation results;

- (3) Summary of validated data (i.e., tables and graphics);
  - (4) Data validation reports and laboratory data reports;
  - (5) Narrative interpretation of data and results;
  - (6) Results of statistical and modeling analyses;
  - (7) Photographs documenting the work conducted; and
  - (8) Conclusions and recommendations for RD, including design parameters and criteria.
- (c) EPA may require Respondents to supplement the PDI Evaluation Report and/or to perform additional pre-design studies.

### **3.4 Treatability Study**

- (a) Respondents shall perform a Treatability Study (TS) for the purpose of testing one or more chemical and parameters for treating the Site's PTW and to determine a performance standard for the PTW remedial action. In addition, as part of the TS, a Pilot Study will be performed that tests one or more of the chemical agents' effectiveness on Site.
- (b) Respondents shall submit a TS Work Plan (TSWP) which shall include a workplan for the Pilot Study for EPA approval. Respondents shall prepare the TSWP in accordance with EPA's *Guide for Conducting Treatability Studies under CERCLA, Final* (Oct. 1992), as supplemented for RD by the *Remedial Design/Remedial Action Handbook*, EPA 540/R-95/059 (June 1995).
- (c) Following completion of the TS (including the Pilot Study), Respondents shall submit a TS Evaluation Report for EPA comment.
- (d) EPA may require Respondents to supplement the TS Evaluation Report and/or to perform additional treatability or pilot studies.

### **3.5 Preliminary (30%) RD.** Respondents shall submit a Preliminary (30%) RD for EPA's comment. The Preliminary RD must include:

- (a) A design criteria report, as described in the *Remedial Design/Remedial Action Handbook*, EPA 540/R-95/059 (June 1995);
- (b) Preliminary drawings and specifications;
- (c) Descriptions of permit requirements, if applicable;
- (d) Preliminary Operation and Maintenance (O&M) Plan and O&M Manual;

- (e) A description of how the RA will be implemented in a manner that minimizes environmental impacts in accordance with EPA's *Principles for Greener Cleanups* (Aug. 2009);
  - (f) A description of monitoring and control measures to protect human health and the environment, such as air monitoring and dust suppression, during the RA;
  - (g) All supporting deliverables required to accompany the Preliminary RD as specified in the RD Schedule.
- 3.6 Intermediate (60%) RD.** Respondents shall submit the Intermediate (60%) RD for EPA's comment. The Intermediate RD must: (a) be a continuation and expansion of the Preliminary RD; (b) address EPA's comments regarding the Preliminary RD; and (c) include the same elements as are required for the Preliminary RD.
- 3.7 Pre-Final (95%) RD.** Respondents shall submit the Pre-final (95%) RD for EPA's comment. The Pre-final RD must be a continuation and expansion of the previous design submittal and must address EPA's comments regarding the Intermediate RD. The Pre-final RD will serve as the approved Final (100%) RD if EPA approves the Pre-final RD without comments. The Pre-final RD must include:
- (a) A complete set of construction drawings and specifications that are: (1) certified by a registered professional engineer; (2) suitable for procurement; and (3) follow the Construction Specifications Institute's MasterFormat 2012;
  - (b) A survey and engineering drawings showing existing Site features, such as elements, property borders, easements, and Site conditions;
  - (c) Pre-Final versions of the same elements and deliverables as are required for the Preliminary and Intermediate RD;
  - (d) A specification for photographic documentation of the RA; and
  - (e) Supporting deliverables as specified in the RD Schedule.
- 3.8 Final (100%) RD.** Respondents shall submit the Final (100%) RD for EPA approval. The Final RD must address EPA's comments on the Pre-final RD and must include final versions of all Pre-final deliverables.
- 3.9 Independent Quality Assurance Team.** Respondents shall notify EPA of Respondents' designated Independent Quality Assurance Team (IQAT). The IQAT will be independent of the Supervising Contractor. Respondents may hire a third party for this purpose. Respondents' notice must include the names, titles, contact information, and qualifications of the members of the IQAT. The IQAT will have the responsibility to determine whether Work is of expected quality and conforms to applicable plans and specifications. The IQAT will have the responsibilities as described in ¶ 2.1.3 of the *Guidance on EPA Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties*, EPA/540/G-90/001 (Apr. 1990).

#### **4. REPORTING**

**4.1 Progress Reports.** Commencing with the first month following the Effective Date of the UAO and until EPA approves the RD, Respondents shall submit progress reports to EPA on a monthly basis, on the tenth day of the month, or as otherwise requested by EPA. The reports must cover all activities that took place during the prior reporting period, including:

- (a) The actions that have been taken toward achieving compliance with the UAO ;
- (b) A summary of all results of sampling, tests, and all other data received or generated by Respondents;
- (c) A description of all deliverables that Respondents submitted to EPA;
- (d) A description of any modifications to the work plans or other schedules that Respondents have proposed or that have been approved by EPA; and
- (e) A description of all activities undertaken in support of the Community Involvement Plan (CIP) during the reporting period and those to be undertaken in the next six weeks.

**4.2 Notice of Progress Report Schedule Changes.** If the schedule for any activity described in the Progress Reports, including activities required to be described under ¶4.1 changes, Respondents shall notify EPA of such change at least 7 days before performance of the activity.

#### **5. DELIVERABLES**

**5.1 Applicability.** Respondents shall submit deliverables for EPA approval or for EPA comment as specified in the SOW. If neither is specified, the deliverable does not require EPA's approval or comment. Paragraphs 5.2 (In Writing) through 5.4 (Technical Specifications) apply to all deliverables. Paragraph 5.5 (Certification) applies to any deliverable that is required to be certified. Paragraph 5.6 (Approval of Deliverables) applies to any deliverable that is required to be submitted for EPA approval.

**5.2 In Writing.** All deliverables under this SOW must be in writing unless otherwise specified.

**5.3** All deliverables must be submitted by the deadlines in the RD Schedule, as applicable. Respondents shall submit all deliverables to EPA in electronic form. If any deliverable includes maps, drawings, or other exhibits that are larger than 8.5" by 11", Respondents shall also provide EPA with paper copies of such exhibits.

**5.4 Technical Specifications**

- (a) Sampling and monitoring data should be submitted in standard EPA Region 2 Electronic Data Deliverable (EDD) format. Other delivery methods may be

allowed if electronic direct submission presents a significant burden or as technology changes.

- (b) Spatial data, including spatially-referenced data and geospatial data, should be submitted: (1) in the ESRI File Geodatabase format and (2) as unprojected geographic coordinates in decimal degree format using North American Datum 1983 (NAD83) or World Geodetic System 1984 (WGS84) as the datum. If applicable, submissions should include the collection method(s). Projected coordinates may optionally be included but must be documented. Spatial data should be accompanied by metadata, and such metadata should be compliant with the Federal Geographic Data Committee (FGDC) Content Standard for Digital Geospatial Metadata and its EPA profile, the EPA Geospatial Metadata Technical Specification. An add-on metadata editor for ESRI software, the EPA Metadata Editor (EME), complies with these FGDC and EPA metadata requirements and is available at <https://edg.epa.gov/EME/>.
- (c) Each file must include an attribute name for each site unit or sub-unit submitted. Consult <http://www.epa.gov/geospatial/policies.html> for any further available guidance on attribute identification and naming.
- (d) Spatial data submitted by Respondents does not, and is not intended to, define the boundaries of the Site.

**5.5 Certification.** All deliverables that require compliance with this ¶ 5.5 must be signed by the Respondents' Project Coordinator, or other responsible official of Respondents, and must contain the following statement:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

## **5.6 Approval of Deliverables**

### **(a) Initial Submissions**

- (1) After review of any deliverable that is required to be submitted for EPA approval under the UAO or the SOW, EPA shall: (i) approve, in whole or in part, the submission; (ii) approve the submission upon specified conditions; (iii) disapprove, in whole or in part, the submission; or (iv) any combination of the foregoing.

- (2) EPA also may modify the initial submission to cure deficiencies in the submission if: (i) EPA determines that disapproving the submission and awaiting a resubmission would cause substantial disruption to the Work; or (ii) previous submission(s) have been disapproved due to material defects and the deficiencies in the initial submission under consideration indicate a bad faith lack of effort to submit an acceptable deliverable.
- (b) **Resubmissions.** Upon receipt of a notice of disapproval under ¶ 5.6(a) (Initial Submissions), or if required by a notice of approval upon specified conditions under ¶ 5.6(a), Respondents shall, within 14 days or such longer time as specified by EPA in such notice, correct the deficiencies and resubmit the deliverable for approval. After review of the resubmitted deliverable, EPA may: (1) approve, in whole or in part, the resubmission; (2) approve the resubmission upon specified conditions; (3) modify the resubmission; (4) disapprove, in whole or in part, the resubmission, requiring Respondents to correct the deficiencies; or (5) any combination of the foregoing.
- (c) **Implementation.** Upon approval, approval upon conditions, or modification by EPA under ¶ 5.6(a) (Initial Submissions) or ¶ 5.6(b) (Resubmissions), of any deliverable, or any portion thereof: (1) such deliverable, or portion thereof, will be incorporated into and enforceable under the UAO; and (2) Respondents shall take any action required by such deliverable, or portion thereof. The implementation of any non-deficient portion of a deliverable submitted or resubmitted under ¶ 5.6(a) or ¶ 5.6(b) does not relieve Respondents of any liability for penalties under Paragraph 92 of the UAO.

**5.7 Supporting Deliverables.** Respondents shall submit each of the following supporting deliverables for EPA approval, except as specifically provided. The deliverables must be submitted, for the first time, by the deadlines in the RD Schedule or any other EPA-approved schedule, as applicable. Respondents shall develop the deliverables in accordance with all applicable regulations, guidances, and policies (see Section 8 (References)). Respondents shall update each of these supporting deliverables as necessary or appropriate during the course of the Work, and/or as requested by EPA.

- (a) **Health and Safety Plan.** The Health and Safety Plan (HASP) describes all activities to be performed to protect on site personnel and area residents from physical, chemical, and all other hazards posed by the Work. Respondents shall develop the HASP in accordance with EPA's Emergency Responder Health and Safety and Occupational Safety and Health Administration (OSHA) requirements under 29 C.F.R. §§ 1910 and 1926. The HASP should cover RD activities. EPA does not approve the HASP, but will review it to ensure that all necessary elements are included and that the plan provides for the protection of human health and the environment.
- (b) **Emergency Response Plan.** The Emergency Response Plan (ERP) must describe procedures to be used in the event of an accident or emergency at the Site (for

example, power outages, water impoundment failure, treatment plant failure, slope failure, etc.). The ERP must include:

- (1) Name of the person or entity responsible for responding in the event of an emergency incident;
  - (2) Plan and date(s) for meeting(s) with the local community, including local, State, and federal agencies involved in the cleanup, as well as local emergency squads and hospitals;
  - (3) Spill Prevention, Control, and Countermeasures (SPCC) Plan (if applicable), consistent with the regulations under 40 C.F.R. Part 112, describing measures to prevent, and contingency plans for, spills and discharges;
  - (4) Notification activities in the event of a release of hazardous substances requiring reporting under Section 103 of CERCLA, 42 U.S.C. § 9603, or Section 304 of the Emergency Planning and Community Right-to-know Act (EPCRA), 42 U.S.C. § 11004; and
  - (5) A description of all necessary actions to ensure compliance with Section XI (Endangerment and Emergency Response) of the UAO in the event of an occurrence during the performance of the Work that causes or threatens a release of Waste Material from the Site that constitutes an emergency or may present an immediate threat to public health or welfare or the environment.
- (c) **Field Sampling Plan.** The Field Sampling Plan (FSP) supplements the QAPP and addresses all sample collection activities. The FSP must be written so that a field sampling team unfamiliar with the project would be able to gather the samples and field information required. Respondents shall develop the FSP in accordance with *Guidance for Conducting Remedial Investigations and Feasibility Studies*, EPA/540/G 89/004 (Oct. 1988).
- (d) **Site Wide Monitoring Plan.** The purpose of the Site Wide Monitoring Plan (SWMP) is to evaluate the location and movement of contamination throughout the Site to obtain baseline information regarding the extent of contamination in affected media, and/or to take contingent action if necessary. The SWMP must include:
- (1) Description of the environmental media to be monitored;
  - (2) Description of the data collection parameters, including existing and proposed monitoring devices and locations, frequency of monitoring, and analytical parameters to be monitored;
  - (3) Description of how performance data will be analyzed, interpreted, and reported, and/or other Site-related requirements; and

- (4) Description of proposed contingency actions in the event that results from monitoring devices indicate higher than expected concentrations of the contaminants of concern, such as increases in frequency of monitoring, and/or installation of additional monitoring devices in the affected areas.
- (e) **Quality Assurance Project Plan.** The Quality Assurance Project Plan (QAPP) addresses sample analysis and data handling regarding the Work. The QAPP must include a detailed explanation of Respondents' quality assurance, quality control, and chain of custody procedures for all treatability, design, compliance, and monitoring samples. Respondents shall develop the QAPP in accordance with *EPA Requirements for Quality Assurance Project Plans*, QA/R-5, EPA/240/B-01/003 (Mar. 2001, reissued May 2006); *Guidance for Quality Assurance Project Plans*, QA/G-5, EPA/240/R 02/009 (Dec. 2002); and *Uniform Federal Policy for Quality Assurance Project Plans*, Parts 1-3, EPA/505/B-04/900A through 900C (Mar. 2005). The QAPP also must include procedures:
  - (1) To ensure that EPA and its authorized representative have reasonable access to laboratories used by Respondents in implementing the UAO (Respondents' Labs);
  - (2) To ensure that Respondents' Labs analyze all samples submitted by EPA pursuant to the QAPP for quality assurance monitoring;
  - (3) To ensure that Respondents' Labs perform all analyses using EPA-accepted methods (i.e., the methods documented in *USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis*, ILM05.4 (Dec. 2006); *USEPA Contract Laboratory Program Statement of Work for Organic Analysis*, SOM01.2 (amended Apr. 2007); and *USEPA Contract Laboratory Program Statement of Work for Inorganic Superfund Methods (Multi-Media, Multi-Concentration)*, ISM01.2 (Jan. 2010)) or other methods acceptable to EPA;
  - (4) To ensure that Respondents' Labs participate in an EPA-accepted QA/QC program or other program QA/QC acceptable to EPA;
  - (5) For Respondents to provide EPA with notice at least 28 days prior to any sample collection activity;
  - (6) For Respondents to provide split samples and/or duplicate samples to EPA upon request;
  - (7) For EPA to take any additional samples that it deems necessary;
  - (8) For EPA to provide to Respondents, upon request, split samples and/or duplicate samples in connection with EPA's oversight sampling; and
  - (9) For Respondents to submit to EPA all sampling and tests results and other data in connection with the implementation of the UAO.

## 6. SCHEDULES

**6.1 Applicability and Revisions.** All deliverables and tasks required under this SOW must be submitted or completed by the deadlines or within the time durations listed in the RD Schedules set forth below. Respondents may submit proposed revised RD Schedules or for EPA approval. Upon EPA's approval, the revised RD Schedules supersede the RD Schedules set forth below, and any previously-approved RD Schedules.

### 6.2 RD Schedule

	Description of Deliverable, Task	Included Supporting Deliverable	¶ Ref.	Deadline
1	RDWP	HASP, ERP, FSP, QAPP, SWMP, PDIWP, TSWP	3.1	45 days after EPA's Authorization to Proceed regarding Supervising Contractor under UAO ¶ 47
2	Preliminary (30%) RD	CQA/QCP, TODP, O&M Plan, O&M Manual, ICIAP	3.5, 3.3(a)	210 days after EPA approval of the RDWP
3	Intermediate (60%) RD	Same as above	3.6	30 days after EPA comments on Preliminary RD
4	Pre-final (90/95%) RD	Same as above	3.7	20 days after EPA comments on Intermediate RD
5	Final (100%) RD	Same as above	3.7(e)	15 days after EPA comments on Pre-final RD

## 7. STATE PARTICIPATION

**7.1 Copies.** Respondents shall, at any time they send a deliverable to EPA, send a copy of such deliverable to the State. EPA shall, at any time it sends a notice, authorization, approval, disapproval, or certification to Respondents, send a copy of such document to the State.

**7.2 Review and Comment.** The State will have a reasonable opportunity for review and comment prior to:

- (a) Any EPA approval or disapproval under ¶ 5.6 (Approval of Deliverables) of any deliverables that are required to be submitted for EPA approval.

## 8. REFERENCES

**8.1** The following regulations and guidance documents, among others, apply to the Work. Any item for which a specific URL is not provided below is available on one of the two EPA Web pages listed in ¶ 8.2:

- (a) A Compendium of Superfund Field Operations Methods, OSWER 9355.0-14, EPA/540/P-87/001a (Aug. 1987).
- (b) CERCLA Compliance with Other Laws Manual, Part I: Interim Final, OSWER 9234.1-01, EPA/540/G-89/006 (Aug. 1988).
- (c) Guidance for Conducting Remedial Investigations and Feasibility Studies, OSWER 9355.3-01, EPA/540/G-89/004 (Oct. 1988).
- (d) CERCLA Compliance with Other Laws Manual, Part II, OSWER 9234.1-02, EPA/540/G-89/009 (Aug. 1989).
- (e) Guidance on EPA Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties, OSWER 9355.5-01, EPA/540/G-90/001 (Apr. 1990).
- (f) Guidance on Expediting Remedial Design and Remedial Actions, OSWER 9355.5-02, EPA/540/G-90/006 (Aug. 1990).
- (g) Guide to Management of Investigation-Derived Wastes, OSWER 9345.3-03FS (Jan. 1992).
- (h) Permits and Permit Equivalency Processes for CERCLA On-Site Response Actions, OSWER 9355.7-03 (Feb. 1992).
- (i) Guidance for Conducting Treatability Studies under CERCLA, OSWER 9380.3-10, EPA/540/R-92/071A (Nov. 1992).
- (j) National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule, 40 C.F.R. Part 300 (Oct. 1994).
- (k) Guidance for Scoping the Remedial Design, OSWER 9355.0-43, EPA/540/R-95/025 (Mar. 1995).
- (l) Remedial Design/Remedial Action Handbook, OSWER 9355.0-04B, EPA/540/R-95/059 (June 1995).
- (m) EPA Guidance for Data Quality Assessment, Practical Methods for Data Analysis, QA/G-9, EPA/600/R-96/084 (July 2000).
- (n) Operation and Maintenance in the Superfund Program, OSWER 9200.1-37FS, EPA/540/F-01/004 (May 2001).
- (o) Comprehensive Five-year Review Guidance, OSWER 9355.7-03B-P, 540-R-01-007 (June 2001).
- (p) Guidance for Quality Assurance Project Plans, QA/G-5, EPA/240/R-02/009 (Dec. 2002).

- (q) Institutional Controls: Third Party Beneficiary Rights in Proprietary Controls (Apr. 2004).
- (r) Quality Systems for Environmental Data and Technology Programs -- Requirements with Guidance for Use, ANSI/ASQ E4-2004 (2004).
- (s) Uniform Federal Policy for Quality Assurance Project Plans, Parts 1-3, EPA/505/B-04/900A through 900C (Mar. 2005).
- (t) Superfund Community Involvement Handbook, EPA/540/K-05/003 (Apr. 2005).
- (u) EPA Guidance on Systematic Planning Using the Data Quality Objectives Process, QA/G-4, EPA/240/B-06/001 (Feb. 2006).
- (v) EPA Requirements for Quality Assurance Project Plans, QA/R-5, EPA/240/B-01/003 (Mar. 2001, reissued May 2006).
- (w) EPA Requirements for Quality Management Plans, QA/R-2, EPA/240/B-01/002 (Mar. 2001, reissued May 2006).
- (x) USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis, ILM05.4 (Dec. 2006).
- (y) USEPA Contract Laboratory Program Statement of Work for Organic Analysis, SOM01.2 (amended Apr. 2007).
- (z) EPA National Geospatial Data Policy, CIO Policy Transmittal 05-002 (Aug. 2008), available at <http://www.epa.gov/geospatial/policies.html> and [http://www.epa.gov/geospatial/docs/National\\_Geospatial\\_Data\\_Policy.pdf](http://www.epa.gov/geospatial/docs/National_Geospatial_Data_Policy.pdf).
- (aa) Summary of Key Existing EPA CERCLA Policies for Groundwater Restoration, OSWER 9283.1-33 (June 2009).
- (bb) Principles for Greener Cleanups (Aug. 2009), available at <http://www.epa.gov/oswer/greenercleanups/>.
- (cc) **[If Technical Assistance Plan provided for in SOW: Providing Communities with Opportunities for Independent Technical Assistance in Superfund Settlements, Interim (Sep. 2009).]**
- (dd) USEPA Contract Laboratory Program Statement of Work for Inorganic Superfund Methods (Multi-Media, Multi-Concentration), ISM01.2 (Jan. 2010).
- (ee) Close Out Procedures for National Priorities List Sites, OSWER 9320.2-22 (May 2011).
- (ff) Groundwater Road Map: Recommended Process for Restoring Contaminated Groundwater at Superfund Sites, OSWER 9283.1-34 (July 2011).

- (gg) Recommended Evaluation of Institutional Controls: Supplement to the “Comprehensive Five-Year Review Guidance,” OSWER 9355.7-18 (Sep. 2011).
- (hh) Construction Specifications Institute's MasterFormat 2012, available from the Construction Specifications Institute, [www.csinet.org/masterformat](http://www.csinet.org/masterformat).
- (ii) Updated Superfund Response and Settlement Approach for Sites Using the Superfund Alternative Approach , OSWER 9200.2-125 (Sep. 2012)
- (jj) Institutional Controls: A Guide to Planning, Implementing, Maintaining, and Enforcing Institutional Controls at Contaminated Sites, OSWER 9355.0-89, EPA/540/R-09/001 (Dec. 2012).
- (kk) Institutional Controls: A Guide to Preparing Institutional Controls Implementation and Assurance Plans at Contaminated Sites, OSWER 9200.0-77, EPA/540/R-09/02 (Dec. 2012).
- (ll) EPA’s Emergency Responder Health and Safety Manual, OSWER 9285.3-12 (July 2005 and updates), <http://www.epaossc.org/HealthSafetyManual/manual-index.htm>
- (mm) Broader Application of Remedial Design and Remedial Action Pilot Project Lessons Learned, OSWER 9200.2-129 (Feb. 2013).
- (nn) Guidance for Evaluating Completion of Groundwater Restoration Remedial Actions, OSWER 9355.0-129 (Nov. 2013).
- (oo) Groundwater Remedy Completion Strategy: Moving Forward with the End in Mind, OSWER 9200.2-144 (May 2014).

**8.2** A more complete list may be found on the following EPA Web pages:

Laws, Policy, and Guidance <http://www.epa.gov/superfund/policy/index.htm>

Test Methods Collections <http://www.epa.gov/fem/methcollectns.htm>

**8.3** For any regulation or guidance referenced in the UAO or SOW, the reference will be read to include any subsequent modification, amendment, or replacement of such regulation or guidance. Such modifications, amendments, or replacements apply to the Work only after Respondents receive notification from EPA of the modification, amendment, or replacement.